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For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: POLYNUCLEOTIDES AND POLYPEPTIDES IN PLANTS

(57) Abstract: The invention relates to plant transcription factor polypeptides, polynucleotides that encode them, homologs from a variety of plant species, and methods of using the polynucleotides and polypeptides to produce transgenic plants having advantageous properties compared to a reference plant. Sequence information related to these polynucleotides and polypeptides can also be used in bioinformatic search methods and is also disclosed.



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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/30292

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C12N 15/29,15/82; A01H 5/00

US CL : 435/320.1, 419, 468; 536/23.6; 800/278,298

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/320.1, 419, 468; 536/23.6; 800/278,298

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,994,622 A (JOFUKU et al.) 30 November 1999 (30.11.1999), column 13 line 55 - column 20 line 32, column 21 - column 30.	1-12
X	US 2002/0076775 A1 (CRANE et al.) 20 June 2002 (20.06.2002), page 7 [0088], page 23 [0252] - page 24 [0260], page 27 [0303] - page 28 [0329], pages 29-63.	1-14, 16
X	Database GenBank on STIC, National Center for Biotechnology Information, (Bethesda, MD, USA), Accession No. AF426252, KUSHNIR et al., Gene Sequence, 08 November 2001.	1-4
X	Database GenBank on STIC, National Center for Biotechnology Information, (Bethesda, MD, USA), Accession No. AR091882, JOFUKU et al., 07 September 2000.	1-4



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

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**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Groups I-MMCXXIII, claim(s) 1-20, drawn to a recombinant polynucleotide, a transgenic plant, and a method for producing a transgenic plant, to the extent that each claim is directed to a particular nucleotide sequence corresponding to a particular group of invention. Groups I-MMCXXIII correspond to the recited individual nucleotide sequences, in their order of presentation. e.g. Group I corresponds to claims 1-12 and 20 directed to SEQ ID NO:1, Group II corresponds to claims 1-12 and 20 directed to SEQ ID NO:3, etc.

The inventions listed as Groups I-MMCXXIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking Groups I-MMCXXIII is a nucleotide sequence encoding a plant transcription factor. However, a nucleotide sequence encoding a plant transcription factor is disclosed by STOCKINGER et al. (Proc. Natl. Acad. Sci. USA, February 1997, Vol. 94, pages 1035-1040), and therefore does not constitute a special technical feature as defined by PCT Rule 13.2, because it does not define a contribution over the prior art. The special technical feature of each group of invention is the distinct nucleic acid sequence that defines each invention.

**Continuation of B. FIELDS SEARCHED Item 3:**

STN (agricola, biosis, biotechno, caba, caplus, medline, uspatfull): inventor names, plant, transgenic, transcription factor, AP2, WRKY51; STIC sequence search SEQ ID NOS: 1, 2, 193, 194

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/30292

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: 1-14 and 16, directed to SEQ ID NOS:1, 2, 193, 194
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐  
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.